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| <p>89-310013/43<br/>HANTSCHE G<br/>06.12.83-DD-257539 (24.05.89) A23f-05/10<br/><b>Preserving aroma of ground roast coffee - by roasting coffee beans and adsorbent spraying with water, cooling, sepg. adsorbent, etc. C89-137241</b></p>   | <p>D13<br/><b>HANT/06.12.83</b><br/>"DD -268-150-A"<br/>D(3-D1D)</p>  |
| <p>In a process for preserving the aroma of ground roast coffee, a mixt. of ground coffee and up to 20% based on coffee, of an adsorbent, pre-loaded with water vapour, is fluidised rapidly by a roasting medium, which at the inlet to the fluidised layer has a temp. up to 300°C and a speed of 3-10 m/sec., based on the free cross-section of the fluidised layer.</p> <p>The mixt. is roasted under these conditions for not more than 300 secs., and after the end of roasting, a corresp. amt. of water is applied in finely divided form to the fluidised layer.</p> <p>The mixt. is then removed quickly from the roasting stage and transferred to a cooling stage, in which the mixt. is cooled by a circulated, cooled inert medium with inlet temp. below 35°C and speed above 3 m/sec., in such a way that both the coffee beans and the adsorbent particles are</p> | <p>cooled to &lt; 45°C in &lt; 300 secs.</p> <p>After removal from the cooling stage, the roasted coffee beans are sped. from the adsorbent and are ground, and are then mixed again with the adsorbent. The adsorbent is a mixt. of macroporous silica gel and microporous silica gel in which the amt. of macroporous gel is below 30%, opt. mixed with synthetic or natural zeolite molecular sieves.</p> <p><b>ADVANTAGE</b></p> <p>The quality of the ground roast coffee is improved, by binding the liberated aromas and flavours on the adsorbent, and a good quality coffee extract can be obt'd. from a smaller amt. of coffee. Less energy is required. The prod. can be stored for a longer time without loss of quality, and there is a saving in packaging material.</p> <p><b>PREFERRED PROCESS</b></p> <p>The dia. of the adsorbent particles is 1-3 mm. Immediately after cooling, the adsorbent is at once ground with the roast coffee. The inert medium in the cooling stage is air directly sucked in..</p> <p>DD-268150-A</p> |

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| <p><b>EXAMPLE</b></p> <p>80 kg of raw coffee was mixed with 1 kg of macroporous silica gel and 6 kg of microporous SiO<sub>2</sub> gel, both completely pre-loaded with water vapour at 25°C. The mixt. was rapidly fluidised in a fluidised bed appts., using as fluidising medium a suitable roasting medium, with inlet temp. 235°C and speed, based on the cross-section of flow, of 6 m/sec.</p> <p>The mixt. was roasted under these conditions for 108 secs after which 12 kg of water was sprayed directly into the fluidised layer. The mixt. was then rapidly fed to a cooling stage, consisting of a vortex layer into which a cooling medium was blown at 20°C and 5 m/sec., cooling the beans and the adsorbent to 40°C in 150 secs.</p> <p>The mixt. was then screened, sepg. the roasted beans from the adsorbent. The amt. of roasted coffee beans in the mixt. was 90.0%, with water content 3.6%, and 9.1% of adsorbent was sepd. The beans were immediately ground, the adsorbent was mixed with the ground coffee, and the mixt. was packed.</p> <p>The prod. had the same smell and taste as coffee produced normally, but maintained these properties for a longer time. From the same amt. of raw coffee, 8.8% more end prod. could be obt'd. (8pp510DAHdwgNo0/0).</p> | <p>DD-268150-A</p> |
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